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PATENT
Customer No. 22,852
Attorney Docket No. 2356.0053-09

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)	
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Herve LE MOUELLIC et al.)	Group Art Unit: 1632
)	
Application No.: 10/770,418)	Examiner: Unassigned
)	
Filed: February 4, 2004)	
)	
For: PROCEDURE FOR SPECIFIC)	Confirmation No.: 1932
REPLACEMENT OF A COPY OF)	
A GENE PRESENT IN THE)	
RECIPIENT GENOME BY THE)	
INTEGRATION OF A GENE)	
DIFFERENT FROM THAT WHERE)	
THE INTEGRATION IS MADE)	

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97(b)

Pursuant to 37 C.F.R. §§ 1.56 and 1.97(b), Applicants bring to the attention of the Examiner the documents listed on the attached PTO 1449. This Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits for the above-referenced application.

Copies of the listed documents were previously submitted in a prior application, Application No. 10/639,754, filed August 13, 2003, upon which Applicants rely for the benefits provided in 35 U.S.C. § 120. Applicants respectfully request that the Examiner consider the listed documents and indicate that they were considered by making appropriate notations on the attached form.

This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the listed documents are material or constitute "prior art." If the Examiner applies any of the documents as prior art against any claim in the application and Applicants determine that the cited documents do not constitute "prior art" under United States law, Applicants reserve the right to present to the office the relevant facts and law regarding the appropriate status of such documents.

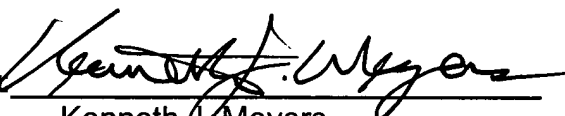
Applicants further reserve the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

If there is any fee due in connection with the filing of this Statement, please charge the fee to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: July 20, 2004

By 
Kenneth C. Meyers
Reg. No. 25,146



INFORMATION DISCLOSURE CITATION

Atty. Docket No.	2356,604,069	Appln. No.	10/770,418
Applicant	Herve LE MOUELLIC et al.		
Filing Date	February 4, 2004	Group:	1632

U.S. PATENT DOCUMENTS						
Examiner Initial*	Document Number	Issue Date	Name	Class	Sub Class	Filing Date If Appropriate
	4,748,119	05/31/1988	Rich et al.			
	5,528,313 B1	03/04/2003	Le Mouellic et al.			
	6,528,314 B1	03/04/2003	Le Mouellic et al.			
	5,272,071	12/21/1993	Chappel			
	5,578,461	11/26/1996	Sherwin et al.			
	5,589,369	12/31/1996	Seidman et al.			
	5,627,059	05/06/1997	Capecchi et al.			
	5,631,153	05/20/1997	Capecchi et al.			
	5,639,618	06/17/1997	Gay			
	5,641,670	06/24/1997	Treco et al.			
	5,650,503	07/22/1997	Archibald et al.			
	5,789,215	08/04/1998	Berns et al.			
	6,638,768	10/28/2003	Le Mouellic et al.			
	6,653,113 B1	11/25/2003	Berns et al.			
FOREIGN PATENT DOCUMENTS						
	Document Number	Publication Date	Country	Class	Sub Class	Translation Yes or No
	EP 0 747 485 A1	12/11/96	Europe			Yes
	EP 0 247 494	12/02/87	Europe			
	EP A 0289121	11/02/88	EP O			
	EP A 0279582	08/24/88	EPO			
	EP A 0169672	01/29/86	EPO			
	EP A 0074808	03/23/83	EPO			
	EP 0 452 484	11/06/90	Europe			
	WO 91/06666	05/16/91	PCT			
	WO 91/06667	05/16/91	PCT			



INFORMATION DISCLOSURE CITATION

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Applicant	Herve LE MOUELLIC et al.		
Filing Date	February 4, 2004	Group:	1632

U.S. PATENT DOCUMENTS

Examiner Initial*	Document Number	Issue Date	Name	Class	Sub Class	Filing Date If Appropriate
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	An et al., "Expression of Bacterial β -Galactosidase in Animal cells," <i>Molecular and Cellular Biology</i> , Vol. 2, pp. 1628-1632 (1982).					
	Bosselman et al., "Germline Transmission of Exogenous Genes in the Chicken," <i>Science</i> , Vol. 24-3, pp. 533-535 (1989).					
	Bradley et al., "Modifying the Mouse: Design and Desire," <i>Biotechnology</i> , Vol. 10, pp. 534-539 (1990).					
	Breier et al., "Primary Structure and Development Expression Pattern of <i>Hox 3.1</i> , a Member of the Murine <i>Hox 3</i> Homeobox Gene Cluster," <i>EMBO</i> , Vol. 7, pp. 1329-1336 (1988).					
	Breitman et al., "Genetic Ablation: Targeted Expression of a Toxin Gene Causes Microphthalmia in Transgenic Mice," <i>Science</i> , Vol. 238, pp. 1563-1565 (1987).					
	Capecchi, Mario R., "The New Mouse Genetics: Altering the Genome by Gene Targeting," <i>Trends in Genetics</i> , Vol. 5, No. 3, pp. 70-76 (1989).					
	Connors et al., "DHFR Coamplification of t-PA in DHFR+ Bovine Endothelial Cells: <i>In Vitro</i> Characterization of the Purified Serine Protease," <i>DNA</i> , Vol. 7, No. 9, pp. 651-661 (1988).					
	Doetschnman et al., "Targeted Mutation of the HPRT Gene in Mouse Embryonic Stem Cells," <i>Proc. Natl. Acad. Sci., USA</i> , Vol. 85, pp. 8583-8587 (1988).					
	Frohman et al., "Cut, Paste, and Save" New Approaches to Altering Specific Genes in Mice," <i>Cell</i> , Vol. 56, pp. 145-147 (1989).					
	Guevara-Olvera et al., "Cloning and Disruption of the Ornithine Decarboxylase Gene of <i>Ustilago Maydis</i> : Evidence for a Role of Polyamines in its Dimorphic Transition," <i>Microbiology</i> , Vol. 143, pp. 2237-2245 (1997).					
	Hallmann et al., "Gene Replacement by Homologous Recombination in the Multicellular Green Alga <i>Volvox Carteri</i> ," <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 94, pp. 7469-7474 (1997).					
	Hippenmeyer et al., "Transfer and Expression of the Bacterial NPT-II Gene in Chick Embryos Using a Schmidt-Ruppin Retrovirus Vector," <i>Nucleic Acids Research</i> , Vol. 16, No. 15, pp. 7619-7632 (1988).					
	Houdebine, "Production of Pharmaceutical Proteins from Transgenic Animals," <i>Journal of Biotechnology</i> , Vol. 34, pp. 269-287 (1994).					
	International Search Report No. PCT/FR90/00185 (June 14, 1990).					
	Jasin et al., "Homologous Integration in Mammalian Cells Without Target Gene Selection," <i>Genes and Development</i> , Vol. 2, pp. 1353-1363.					
	Johnson et al., "Targeting of Non-expressed Genes in Embryonic Stem Cells Via Homologous Recombination," <i>Science</i> , Vol. 245, pp. 1234-1236 (1989).					

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U.S. PATENT DOCUMENTS						
Examiner Initial*	Document Number	Issue Date	Name	Class	Sub Class	Filing Date If Appropriate
	Johnson, R. S., et al., "Targeting of Non-expressed Genes in Embryonic Stem Cells Via Homologous Recombination," <i>Chemical Abstracts</i> , Vol. 111, No. 21, 1888649F (1989).					
	Joyner et al., "Production of a Mutation in Mouse En-2 Gene by Homologous Recombination in Embryonic Stem Cells," <i>Nature</i> , Vol. 338, pp. 153-156 (1989).					
	Kaufman et al., "Coamplification and Co expression of Human Tissue -Type Plasminogen Activator and Murine Dihydrofolate Reductase sequences in Chinese Hamster Ovary Cells," <i>Molecular and Cellular Biology</i> , Vol. 5, No. 7, pp. 1750-1759 (1985).					
	Kim et al., "Recombinant Fragment Assay for Gene Targeting Based on the Polymerase Chain Reaction," <i>Nucleic Acids Res.</i> , Vol. 16, pp. 8887-8903.					
	Knight et al., "Transgenic Rabbits with Lymphocytic Leukemia Induced by the C-myc Oncogene Fused with the Immunoglobulin Heavy Chain Enhancer," <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 85, pp. 3130-3134 (1988).					
	Kothary et al., "A Transgene Containing <i>lacZ</i> Inserted into the <i>dystonia</i> Locus is Expressed in Neural Tube," <i>Nature</i> , Vol. 335, pp. 435-437 (1988).					
	Le Mouellic, H., et al., "Targeted Replacement of the Homeobox Gene <i>Hox-3.1</i> by the <i>Escherichia coli lacZ</i> in Mouse Chimeric Embryos," <i>Proc. Natl. Acad. Sci., USA</i> , Vol. 87, pp. 4712-4716 (1990).					
	Letsou et al., "Effect of the Molecular Nature of Mutation on the Efficiency of Intrachromosomal Gene Conversion in Mouse Cells," <i>Genetics</i> , pp. 759-769 (1987).					
	Mansour, et al., "Introduction of a <i>lacZ</i> Reportere Gene in to the Mouse <i>int-2</i> Locus by Homologous Recombination," <i>Proc. Natl. Acad. Sci., USA</i> , Vol. 87, pp. 7688-7692 (1990).					
	Mansour, S.L., et al., Disruption of the Proto-oncogene <i>int-2</i> in Mouse Embryo-Derived Stem Cells: A General Strategy for Targeting Mutations to Non-selectable Gene," <i>Nature</i> , Vol. 336, pp. 348-352 (1998).					
	Michel et al., "Expression of Amplified Hepatitis B Virus Surface Antigen Genes in Chinese Hamster Ovary Cells," <i>BIO/Technology</i> , Vol. 3, pp. 561-566 (1985).					
	Montrose-Rafizadeh et al., "Gene Targeting of a CFTR Allele in HT29 Human Epithelial Cells," <i>Journal of Cellular Physiology</i> , Vol. 170, pp. 299-308 (1997).					
	Nagpal et al., "Expression of the RAD 1 and RAD3 Genes of <i>Sacharomyces Cerevisiae</i> is not Affected by DNA Damage or During the Cell Division Cycle," <i>Mol. Gen. Genet.</i> , pp. 59-63 (1985).					
	Palmiter, R.D., et al., "Cell Lineage Ablation in Transgenic Mice by Cell-specific Expression of a Toxin Gene," <i>Cell</i> , Vol. 50, pp. 435-443 (1987).					
	Riabowol et al., "The Catalytic Subunit of cAMP-Dependent Protein Kinase Induces Expression of Genes Containing cAMP-Responsive Enhancer Elements," <i>Nature</i> , Vol. 336, pp. 83-86.					
	Rolig et al., "Survival, Mutagenesis, and Host Cell Reactivation in a Chinese Hamster Ovary Cell <i>ERCC1</i> Knock-out Mutant," <i>Mutagenesis</i> , Vol. 12, pp. 277-283 (1997).					

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U.S. PATENT DOCUMENTS						
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	Shalev et al., "The Maize Transposable Element Ac Induces Recombination Between the Donor site and an Homologous Ectopic Sequence," <i>Genetics</i> , Vol. 146, pp. 1143-1151 (1997).					
	Smithies et al., "Insertion of DNA Sequences into the Human Chromosomal β -globin Locus by Homologous Recombination," <i>Nature</i> , Vol. 317, pp. 230-234.					
	Stuart et al., "Replication, Integration and Stable Germ-line Transmission of Foreign Sequences Injected into Early Zebrafish Embryos," <i>Genetics</i> , Vol. 130, pp. 403-411 (1988).					
	Thomas et al., "Site-Directed Mutagenesis by Gene Targeting in Mouse Embryo-Derived Stem Cells," <i>Cell</i> , Vol. 51, pp. 503-512.					
	Thompson et al., "Germ Line Transmission and Expression of a Corrected HPRT Gene Produced by Gene Targeting in Embryonic Stem Cells," <i>Cell</i> , Vol. 56, pp. 313-321 (1989).					
	Ware et al., "Development of Embryonic Stem Cell Lines from Farm Animals," <i>Society for the Study of Reproduction</i> , Vol. 38, p. 129 (1988).					
	Wrischnik et al., "Length Mutations in Human Mitochondrial DNA: Direct Sequencing of Enzymatically Amplified DNA", <i>NAR</i> , Vol. 15, pp. 529-542 (1987).					
	Yagi et al., "Homologous Recombination of c-fyn Locus of Mouse Embryonic Stem Cells with Use of Diphtheria Toxin A-Fragment Gene in Negative Selection," <i>Natl. Acad. Sci., USA</i> , Vol. 87, pp. 9918-9922 (1990).					
	Zimmer et al., "Production of Chimaeric Mice Containing Embryonic Stem (ES) Cells Carrying a Homeobox HOX 1.1 Allele Mutated by Homologous recombination," <i>Nature</i> , Vol. 338, pp. 150-153 (1989).					
Examiner			Date Considered			
*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.						
Form PTO 1449			Patent and Trademark Office - U.S. Department of Commerce			